

WHAT IS CLAIMED IS:

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1. An image display system capable of performing stereoscopic display, comprising:

stereoscopic image display means for displaying a stereoscopic image having stripe parallax images arranged for right and left eyes;

stereoscopic vision control for controlling directivity of the stereoscopic image such that stripe images of the stereoscopic image are respectively observed with the right and left eyes; and

changing means for, when a relative positional relationship between the stereoscopic image and said stereoscopic vision control means is not a proper relationship with which an observer can obtain a proper stereoscopic vision, changing the relative positional relationship to realize a proper stereoscopic vision.

2. The system according to claim 1, wherein said stereoscopic image display displays a stereoscopic image in a window opened at a desired position within a display screen.

3. The system according to claim 1, wherein said changing means ^{shifts} moves the window by a distance corresponding to a stripe pitch of the stripe image in a direction of stripe width of the stripe image.

4. The system according to claim 3, wherein an

amount of ^{shift}~~movement~~ of the window is equal to a minimum pixel pitch of said stereoscopic image display means.

5. The system according to claim 3, wherein the stripe image is ^{comprised of}~~constituted by~~ a horizontal stripe

5 image in the screen, and a direction in which the window is ^{shifted}~~moved~~ is a vertical direction in the screen.

6. The system according to claim 3, wherein the striped image is ^{comprised of}~~constituted by~~ vertical stripe images in the screen, and a direction in which the window is

10 ^{shifted}~~moved~~ is a horizontal direction in the screen.

7. The system according to claim 3, wherein said changing means ^{shifts}~~moves~~ the stereoscopic image in the window by a distance corresponding to length of a short side of each of the stripe images constituting
15 the stereoscopic image in a direction parallel to a short side of the stripe image.

8. The system according to claim 7, wherein an amount of ^{shift}~~movement~~ of the stereoscopic image in the window is equal to a minimum pixel pitch of said
20 stereoscopic image display means.

9. The system according to claim 7, wherein the stripe image is constituted by a horizontal stripe image in the screen, and a direction in which the stereoscopic image in the window is ^{shifted}~~moved~~ is a
25 vertical direction in the screen.

10. The system according to claim 7, wherein the

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striped image is constituted by vertical stripe images
in the screen, and a direction in which the
stereoscopic image in the window is ^{shifted}~~moved~~ is a
horizontal direction in the screen.

5 11. The system according to claim ¹~~2~~, wherein said
changing means interchanges odd and even stripe images
constituting the stereoscopic image displayed in the
window.

10 12. The system according to claim ¹~~2~~, wherein said
changing means changes a relative positional
relationship between the stereoscopic image ^{in said window}~~and said~~
stereoscopic vision control means by changing said
stereoscopic vision control means.

15 13. The system according to claim 12, wherein said
changing means physically ^{shifts}~~moves~~ said stereoscopic
vision control means.

20 14. The system according to claim 12, wherein said
stereoscopic vision control means comprises optical
directivity control means ^{comprised of}~~constituted by~~ a spatial
light modulation element which is electronically
controlled, and

25 said changing means electronically controls said
optical directivity control means to shift a state of
said control means to a state in which an observer can
obtain a proper stereoscopic vision.

15. The system according to claim 1, wherein said

changing means is executed after the window is opened and a stereoscopic image is displayed therein or the window is moved.

16. The system according to claim 1, wherein said
5 changing means is executed at respective positions between movements of the window while the window is moved.

17. The system according to claim 16, wherein an
10 execution period of said changing means is shortened while the window is moved.

SUB 372
D4 18. An information processing apparatus which can be
connected to an image display apparatus having
stereoscopic vision control means for controlling
directivity of a stereoscopic image to allow an
15 observer to observe stripe images of the stereoscopic image with right and left eyes of the observer,
respectively, comprising:

generation means for generating image data
including a window in which stripe parallax images
20 corresponding to the right and left eyes are arranged;

determination means for determining whether a
relative positional relationship between the window
and said stereoscopic vision control means of said
image display apparatus is a proper positional
25 relationship which allows a proper stereoscopic vision; and

adjustment means for, when said determination means determines that the relationship is not the proper relationship which allows a proper stereoscopic vision, adjusting the relative positional relationship to allow a proper stereoscopic vision.

19. The apparatus according to claim 18, wherein said adjustment means ^{shifts} moves the window by a distance corresponding to ^a length of a short side of the stripe image in a direction parallel to a short side of the stripe image.

20. The apparatus according to claim 19, wherein an amount of ^{shifts} movement of the window is equal to a minimum pixel pitch of said image display apparatus connected to said information processing apparatus.

21. The apparatus according to claim 19, wherein the stripe image is ^{comprised of} constituted by a horizontal stripe image in the screen, and a direction in which the window is ^{shifted} moved is a vertical direction in the screen.

22. The apparatus according to claim 19, wherein the striped image is ^{comprised of} constituted by vertical stripe images in the screen, and a direction in which the window is ^{shifted} moved is a horizontal direction in the screen.

23. The apparatus according to claim 18, wherein said adjustment means ^{shifts} moves the stereoscopic image in the window by a distance corresponding to length of a short side of each of the stripe images constituting

the stereoscopic image in a direction parallel to a short side of the stripe image.

54b 07 24. The apparatus according to claim 23, wherein an amount of ^{shift}~~movement~~ of the stereoscopic image in the window is equal to a minimum pixel pitch of said image display apparatus.

25. The apparatus according to claim 23, wherein the stripe image is ^{comprised of}~~constituted by~~ a horizontal stripe image in the screen, and a direction in which the stereoscopic image in the window is ^{shifted}~~moved~~ is a vertical direction in the screen.

26. The apparatus according to claim 23, wherein the striped image is ^{comprised of}~~constituted by~~ vertical stripe images in the screen, and a direction in which the stereoscopic image in the window is ^{shifted}~~moved~~ is a horizontal direction in the screen.

27. The apparatus according to claim 18, wherein said adjustment means interchanges odd and even stripe images ^{comprising}~~constituting the~~ stereoscopic image displayed in the window.

28. The apparatus according to claim 18, wherein said adjustment means changes a relative positional relationship between the stereoscopic image ^{in the window}~~and said~~ stereoscopic vision control means by changing said stereoscopic vision control means.

29. The apparatus according to claim 28, wherein said

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adjustment means adjusts the relative positional relationship between the stereoscopic image and said stereoscopic vision control means by physically ^{shifting} ~~moving~~ said stereoscopic vision control means.

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5 30. The apparatus according to claim 28, wherein said adjustment means adjusts the relative positional relationship between the stereoscopic image ^{in the window} and said stereoscopic vision control means by electronically controlling optical directivity control means included
10 in said stereoscopic vision control means and constituted by spatial light modulation element which is electronically controlled.

31. The apparatus according to claim 18, further comprising detection means for detecting that a window
15 in which a stereoscopic image is to be displayed is opened or moved, and

wherein said adjustment means is executed when said detection means detects that the window is opened or moved.

20 32. The apparatus according to claim 18, further comprising detection means for detecting movement of a window in which a stereoscopic image is displayed, and

wherein said adjustment means is executed at respective positions between movements of the window
25 while the window is moved.

33. The apparatus according to claim 32, wherein an

execution period of said adjustment means is shortened while the window is moved.

SUB 32
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34. A method of controlling an information display system having stereoscopic vision control means for controlling directivity of a stereoscopic image obtained by arranging stripe parallax images corresponding to right and left eyes of an observer to allow the observer to observe stripe images of the stereoscopic image with right and left eyes, respectively, comprising:

the stereoscopic image display step of displaying a stereoscopic image obtained by arranging stripe parallax images corresponding to the right and left eyes;

the detection step of detecting a relative positional relationship between the stereoscopic image and said stereoscopic vision control means; and

the changing step of, when the relative positional relationship detected in the detection step is not a proper relationship which allows a proper stereoscopic vision, changing the relative positional relationship to allow a proper stereoscopic vision.

35. A method of controlling an information processing apparatus which can be connected to an image display apparatus having stereoscopic vision control means for controlling directivity of a stereoscopic image

obtained by arranging stripe parallax images
corresponding to right and left eyes of an observer to
allow the observer to observe stripe images of the
stereoscopic image with right and left eyes,

5 respectively, comprising:

the generation step of generating image data
including a window in which stripe parallax images
corresponding to the right and left eyes are arranged;

the determination step of determining whether a
10 relative positional relationship between the window
and said stereoscopic vision control means of said
image display apparatus is a proper positional
relationship which allows a proper stereoscopic
vision; and

15 the adjustment step, when it is determined in the
determination step that the relationship is not the
proper relationship which allows a proper stereoscopic
vision, adjusting the relative positional relationship
to allow a proper stereoscopic vision.

20 36. A storage medium storing a computer program for
performing image display by using an image display
apparatus having stereoscopic vision control means for
controlling directivity of a stereoscopic image
obtained by arranging stripe parallax images
25 corresponding to right and left eyes of an observer to
allow the observer to observe stripe images of the

stereoscopic image with right and left eyes,
respectively, said computer program comprising:

5 a code of the determination step of determining
whether a relative positional relationship between a
window in which stripe parallax images corresponding
to the right and left eyes are arranged and said
stereoscopic vision control means of said image
display apparatus is a proper positional relationship
which allows a proper stereoscopic vision; and

10 a code of the adjustment step of, when it is
determined in the determination step that the
relationship is not the proper relationship which
allows a proper stereoscopic vision, adjusting the
relative positional relationship to allow a proper
15 stereoscopic vision.

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